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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/047,447   | 01/14/2002  | Manfred Jagiella     | HOE-669             | 1068             |
| 20028  | 7590        | 05/04/2005           | EXAMINER            |                  |
| Lipsitz & McAllister, LLC<br>755 MAIN STREET<br>MONROE, CT 06468 |             |                      | PHAM, HOA Q         |                  |
|  |             | ART UNIT             | PAPER NUMBER        | 2877             |

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/047,447             | JAGIELLA ET AL.     |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Hoa Q. Pham            | 2877                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 February 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 50,52-71,74-93,95,96 and 98 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 50,52-71,74-93,95,96 and 98 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 January 2002 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/14/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/4/05 has been entered.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 50, 52-57, 61-71, 74-76 and 90-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomi (4,894,597) in view of Fossey et al (5,988,971).

Regarding claims 50, 62-66, 68-69, and 90; Ohtomi (of record) discloses a deburring robot comprises a non-contact distance sensor (97) with a detector head (9)

is positioned at a distance to the workpiece (6), the detector head and the workpiece are movable relative to one another (figures 2-4). Ohtomi does not explicitly teach that the detector head having an active surface that is electromagnetically couplable to the workpiece via at least one of inductive and capacitance for determining the distance between the detector head and the workpiece; however, such a feature is known in the art as taught by Fossey et al. Fossey et al, from the same field of endeavor, teaches it is well known in the art to use a capacitive sensor for measuring the distance between the sensor and the object (see column 7, lines 1-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the detector head of Ohtomi by a detector head of Fossey et al because they are both used for distance measurement. A substitution one for another is generally recognized as being within the level of ordinary skill in the art.

Regarding claims 52-56, and 91-92; see abstract of Fossey et al for moving relative between the detector head and workpiece. It also would have been obvious to one having ordinary skill in the art at the time the invention was made to move and/or rotate the detector head in different directions so that the whole surface is inspected.

Regarding claims 57, 61, see column 2, lines 57-59 for detector position adjusting mechanism (10).

Regarding claim 67, see column 3, lines 7-19 of Ohtomi for comparison.

Regarding claims 70-71 and 74, it would have been obvious to replace the capacitive sensor of Fossey et al by an inductive sensor because they would function in the same manner.

Regarding claims 75-76, see column 7, lines 1-30 of Fossey et al for capacitive displacement measuring device.

5. Claims 77-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomi and Fossey et al as applied to claim 50 above, and further in view of Matsuura et al (5,243,265).

Regarding claims 77-81 and 88-89, both Ohtomi and Fossey et al do not explicitly teach the device having a second distance sensor or a plurality of sensors; however, such a feature is known in the art as taught by Matsuura et al (of record). Matsuura et al, from the same field of endeavor, teach the use of two distance sensors (5a and 5b)(see figures 1 and 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Ohtomi an additional distance sensor as taught by Matsuura et al. The rationale for this modification would have arisen from the fact that using additional sensor would increase the speed of the measurement.

Regarding claims 82, 83, and 86-87; Matsuura et al does not explicitly teach that the sensors have the same viewing plane or offset viewing plane or different view directions. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the sensors so that they are measuring the distance at different viewing planes or directions. The rationale for this modification would have arisen from the fact that the viewing planes or directions are adjusted on the basis of different shapes, diameter of the workpieces.

6. Claims 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomi and Fossey et al as applied to claim 50 above, and further in view of Dau (4,199,258).

Ohtomi and Fossey et al do not explicitly teach that the inspection device could be used to detect the defects in the bore; however, such a feature is known in the art as taught by Dau. Dau (of record) teaches the use of a distance-measuring device for measuring the internal configuration of a tube (see abstract). Since Ohtomi and Fossey et al teach the use of a distance sensor for measuring the defects of an object, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the distance sensor of Ohtomi and Fossey et al for detect burrs in the bore as suggested by Dau because the sensor would function in the same manner.

7. Claims 93, 95, 96 and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dau in view of Fossey et al.

Dau discloses a distance measuring device and method which has all the features of the present invention except that the distance sensor operating using at least one of electrical inductance and capacitance without contacting the workpiece; however, such a feature is known in the art, for example, as taught by Fossey et al. Fossey et al teaches the use of a capacitance distance sensor head for measuring the distance between the sensor head and the workpiece. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the sensor unit of Dau by a capacitance distance sensor head of Fossey et al because the

both use for measuring the distance between the sensor head and the surface of the object to be tested. A substitution one for another is recognized as being within the level of ordinary skill in the art.

***Response to Arguments***

8. Applicant's arguments filed 2/24/05 have been fully considered but they are not persuasive.

The Declaration filed under 37 CFR 1.132 filed 2/4/05 is sufficient to overcome the rejection of claims 50-98 based upon the combination of Ohtomi, Franklin et al and Matsuura et al. However, it is insufficient to overcome the rejection of the claims based upon the combination of Ohtomi, Fossey et al, Matsuura et al and Dau as mentioned above.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kasai et al (5,523,685) and Bossard et al (5,119,030) disclose a device for inspection surface of an object.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

HP  
April 27, 2005